Computer Aided Engineering & Design for Electronics Laboratory **Bldg 1202 room 221– This lab is in full use by all of the SED branches located in building 1202. The lab provides seats to network all engineering tools and software necessary for various engineering and research projects in all the branches. The lab is environmentally controlled to accommodate high speed computers and workstations containing the engineering tools and software.**

- **Developed to provide a cost effective design environment tailored to the needs of flight system electronics designers. CAEDE resources will be dedicated to the administration and support of documented design processes and software utilized in the development of prototype, ground, and flight hardware.**
- **Is comprised of computer servers, computing hardware, and software resources that facilitate research, design, and development of electronics.**
- **Provides computer workstations for summer students and transient researchers while the workstation software packages address project requirements that have limited applicability or low cost overhead.**
- **Major software is made available to the design community via server floating licenses that enable distributed use of high-value software as well as project control over software revision.**
- **This centralized collection of software resources provides a consistent development environment across multiple projects enabling simplified administration, homogenized design processes, and accumulated experience and expertise.**
- **As new software is required, its value to the community is assessed and if applicable as a CAEDE supported software load, will be installed on CAEDE. The cost of this is covered by the project that will presumably be the predominate user of the new capability**

- Capabilities:
  - **Inside the lab, users have access to 4 workstations, peripherals, printers, and a plotter.**
    - Each workstation has access to CAEDE hosted software, either through floating license or terminal server, as well as additional applications specific to limited users.

  - includes color and black and white duplex laser printers as well as an HP 800PS ink-jet plotter capable of plotting from a continuous roll or single sheets of paper ranging from standard plotter paper to photo quality high gloss paper

- **The CAEDE servers provide file storage for the user and project data. Currently hosts 2 terabyte RAID systems and backup and Disaster Recovery for user files**
- **Provides VHDL Design and Simulation software (ModelSim) to address the major portion of the design effort in modern electronics systems allocated to the development of FPGA implementations**
- **Provides board level design and simulation resources and software (Altium and Cadence) to facilitate design, simulation, capture, and layout of the prototype and flight PCB. Preliminary designs can be captured in schematics for either PSpice or HyperLynx simulation providing analog or signal integrity analysis, respectively**
- **System Administrator provides Server, workstation, printer/plotter etc Admin and user support as well as IT Security implementations**
- **Supports common libraries for tools**